

The University of Iowa

FY23 Annual Economic Development Report

Ranked as a top-200 “best global universities” and #47 “best public university” accompanied by 33 consecutive years with one of the nation’s “best academic hospitals,” the University of Iowa stresses bringing “learning and discovery into the service of the people of the state of Iowa, the nation and the world” as a central mission. Translation of research and knowledge generated by University of Iowa faculty, staff and students is a central means through which this mission is accomplished. Those actions subsequently translate into positive impact on the economy of Iowa. The University’s 2022-2027 strategic plan calls to “Accelerate entrepreneurship and support broader economic development through innovative engagement and partnerships with industry and community organizations.” This strategy is implemented by:

- Creating increased opportunities for entrepreneurial education, new venture creation, technology transfer, with a specific focus in medtech and edtech innovation, and
- Connecting faculty, staff, and students to organizations and subject matter experts to solve unmet needs in social, health, technical, and business

A robust strategy incenting economic development, on a campus like the University of Iowa, is key to transforming ideas into impact benefiting Iowans and beyond.

Consequently, this report provides a description of the UI’s key initiatives in the economic development space— the work of the Chief Innovation Officer, who oversees Protostudios, UI Research Park, Translational Research Incubator, UI Ventures, and MADE; UI Research Foundation; John Pappajohn Entrepreneurial Center (JPEC); UI Pharmaceuticals, and other activities.

I. Organizing to Support Economic Development

The Chief Innovation Officer, who reports to the Vice President for External Relations with a dotted-line report to the University President, oversees and coordinates the economic development activities for faculty, staff and graduate students at the University of Iowa. The Chief Innovation Officer oversees: Protostudios, UI Research Park, Translational Research Incubator, UI Ventures, and MADE.

In FY23, several broad themes served as the central organizing principles of the Innovation Office, including:

Establishing the Medical Innovation Hub. With the support of an \$8 million grant from the Governor’s office, the Office of Innovation will open the Medical Innovation Hub located adjacent to the UI’s Hospitals & Clinics and healthcare campus. The Hub will become the gathering place for healthcare innovators and industry. There they can access unique

equipment, resources and expertise while also commingling with other innovative faculty, staff and graduate students. A key success factor in similar spaces elsewhere is proximity to the “day jobs” of those clinicians, researchers and grad students eager to take advantage of this offering. Creating an innovation Hub within the healthcare complex is a major cultural breakthrough that will reduce the bottleneck of faculty seeking start-up company wet lab space while propelling nascent entrepreneurs forward.

Evolving the UI Research Park. As the area surrounding the UI’s Research Park continues to rapidly develop (with the construction of a new UIHC facility, an orthopedic surgical center, and housing, restaurants and shops connecting Coralville and North Liberty), the Research Park is situated to benefit from the increased vibrancy of the area. With the Regents’ concurrence, a change in ownership rules enacted in FY23 allows the Park to sell land, where before it could only be leased, thereby removing a barrier frequently cited as a negative by prospective partners. New marketing approaches, signage, engaging experienced business development talent and programming also are under development to raise the Park’s profile.

Seeding Interest in Translational Activities with Next Generation. The Iowa Innovation Leadership Fellows program launched in FY23. The first cohort consisted of 12 competitively selected graduate students, post-doctoral researchers, and first year medical/dental students in order to teach the significance of translational research outcomes, how to go about solving unmet needs and gaining exposure and connections to industry experts. They learned about the programs available to support entrepreneurial activities and commercialization efforts on campus. They interacted with UI faculty, alumni and entrepreneurs with experience in commercialization of academic research. The Fellows offer the Office of Innovation unique insights to help shape communications with academic departments, identify opportunities to engage with those departments, and encourage their colleagues to consider translational activities when appropriate.

Extending the UI Innovation Support Structure Across Iowa. With grant support from the Ewing Marion Kauffman Foundation the Office of Innovation launched the Nurse Innovators project, which is designed to encourage nurses to bring forward solutions to unmet needs. We guide and assist with their further development. Intentionally, this project intends to work with nurses working around the State of Iowa and across a variety of nursing professions. The goal is to evaluate the innovative potential across Iowa, empower nurses to pursue addressing unmet needs while exposing underserved healthcare communities and workers to the support that the Office of Innovation can extend to innovators outside the university.

Mobilizing an External Network. The Innovation Office is exposing UI start-ups and entrepreneurially minded faculty, staff and students to skills and connections drawn from a network of contacts in the healthcare innovation and venture capital space. The network of individuals able to assess start-ups potential, offer strategic and experiential assistance, and connect them to essential talent not resident to Iowa.

Creating a Concierge Service to Support UI Faculty Innovations. Under the direction of UI Ventures, the Innovation Team established a comprehensive suite of services to assist UI faculty looking to engage the commercialization process. This service has and will continue to connect entrepreneurial faculty and companies with strategic support from medtech venture capital and industry knowledge, FDA guidance, intellectual property or clinical study guidance and reimbursement strategies.

Expansion of Innovation Funding Programs. Building on the successful Innovation fund programs in partnership with the Colleges of Medicine, Engineering and Department of Nursing to promote faculty innovation in medical device and software and College of Education to support Edtech, UI Ventures expanded Innovation Funding to College of Dentistry and College of Pharmacy in FY23. Encouraging proof of concept and translational projects is a key building block in the Economic Development pipeline. In addition to meeting practical and clinical needs, the projects provide a resource for innovative faculty to promote a more inventive culture. In FY23, 11 awards were made across 5 colleges for a total of \$480,000 granted. The majority of the awards supported medical device (55%), followed by software (27%), and training tools (18%).

II. University of Iowa Economic Development Infrastructure



**University of Iowa
Research Foundation**

Researchers at the University of Iowa continue to develop innovative solutions in an attempt to address the world's most pressing issues, while entrusting their inventions to the UI Research Foundation (UIRF) for patenting and licensing into the commercial market. UI researchers have seen great success over the last year both in the lab and through commercial efforts. For example, Cardio Diagnostics, a pioneering precision cardiovascular medicine company founded by a UI faculty and graduate student, announced an expansion of their IP portfolio which is exclusively licensed from UIRF. And Perspective Therapeutics, Inc., a precision oncology company developing alpha-particle therapies and complementary diagnostic imaging agents based in-part on IP licensed from UIRF, announced the presentation of extremely encouraging results regarding its lead preclinical candidate for neuroendocrine tumors.

In the past year, UIRF continued to work with company partners to bring UI technologies closer to commercial development. UIRF recently completed a license with hC Bioscience, a faculty founded start-up that recently extended their Series A funding round to \$40 million. UIRF also completed a license with Harvest Increase Agriculture, another faculty founded start-up company focused on agriculture science and plant growth. These efforts demonstrate UIRF's commitment to working with all researchers across campus, from therapeutics to chemical engineering. UIRF is also committed to helping our faculty members commercialize and distribute their research tools, for example cell lines and mouse models. As such, UIRF has signed licenses with several new biotech and reagent companies, and extended licenses with existing partners. These are just a few examples of how UIRF has helped our university researchers amplify the impact of their work to directly benefit people's lives.

Revenue from the licensing agreements UIRF negotiates with our company partners is shared with our inventors personally and also supports department, collegiate, and cross-campus research efforts. Many licensing relationships also lead to sponsored research at the university. And in fact, the connection between research grants and inventions goes both ways—federal agencies, non-profit-foundations, and corporations usually include intellectual property provisions in their grants, and UIRF takes the lead in helping our researchers satisfy these requirements.

protostudios

Protostudios (<https://protostudios.uiowa.edu/>) is a state-of-the-art, rapid-prototyping facility located in the MERGE co-working space in downtown Iowa City, Van Allen Hall and at UIHC. It works with UI researchers, researchers from other Iowa universities and healthcare institutions and community members to develop fully functional prototypes of product ideas, allowing innovators to test, redesign, and determine manufacturing paths and demonstrate usability to investors. Protostudios primary focus is on biomedical and electronics prototyping with access to 3D printers (plastics, metals, ceramics) milling, laser/wet jet cutter, printed circuit board fabrication, and consulting from on-staff industrial designers and engineers. Anatomical modeling of human organs prior to complex surgeries is developing into a key value add of Protostudios.

The creation of Protostudios was funded through a \$1.5 million Strategic Infrastructure Fund grant from the Iowa Economic Development Authority, and the authority approved a \$500,000 grant to outfit additional space for new equipment that expands the organization's capabilities.

IOWA

Research Park

The UI Research Park (<https://researchpark.uiowa.edu/>) leases building sites and space to growing technology companies that require sustained research relationships with the university. The Park is home to a business incubator program that has nurtured over 100 UI start-ups and other new ventures since its founding. Incubator tenant companies can draw on both the research and business resources of the university, including access to UI libraries, hazardous waste management services, support for SBIR/STTR grants (Small Business Innovation Research/Small Business Technology Transfer federal grants), educational seminars, networking opportunities, and shipping/package handling.

The BioVentures Center (BVC) in the park contains wet laboratory modules that can be shared for life science companies and office/dry laboratory modules for engineering and technology-based companies. The BioVentures Center wet lab space is currently full and has a waiting list.

The Park is also home to three of the university's specialized core facilities. These facilities provide technical support services critical to the growth of start-up companies as well as existing industry partners:

- Center for Biocatalysis and Bioprocessing operates a microbial fermentation facility and specializes in both upstream and downstream bioprocessing with expertise in process

scale up for food products, biofuels, biopharmaceuticals, and other biotechnology products.

- National Advanced Driving Simulator conducts research and development on driving safety for the government, military, and industry partners.
- State Hygienic Laboratory is the state’s environmental and public health laboratory, serving all ninety-nine Iowa counties as well as out-of-state clients by testing and tracking infectious diseases and illnesses.

IOWA

UI Ventures

UI Ventures (<https://uiventures.uiowa.edu/>) assists university faculty and staff in transforming their research into successful business endeavors so that their technologies can reach the population it was intended to help. As part of the Office of Innovation, UI Ventures supports a cultural transformation on campus and provides access to capital and world-class talent to build successful companies around innovations originating from research at the university. As faculty develop technology, they are often left with an unknown question of “What’s next?” as their research evolves beyond basic principles and requires additional expertise and funding beyond what is available at the University. UI Ventures supports this transition through deployment of GAP funds to address specific business validation questions and utilizes a robust network of experts who have successfully started, scaled, and exited companies in the same areas as our faculty entrepreneurs. If faculty choose to start a new company, UI Ventures facilitates connections with industry-specific executives and funding resources to launch and grow their companies as well as serving as a liaison between the company and university services. UI Ventures routinely brings venture capitalists and successful entrepreneurs from around the country to campus so that faculty may directly engage with those who have direct experience. In addition, UI Ventures manages the TRI incubator, Nurse Innovators program, and operates the MADE program to encourage faculty and staff innovation and entrepreneurship throughout campus.



The Translational Research Incubator (TRI) (<https://uiventures.uiowa.edu/translational-research-incubator>) serves a critical role in launching medtech companies by providing 1) a physical location for the company in close proximity to clinical founders; and 2) shared lab equipment so companies can focus their limited resources on technology-specific development to maximize their funding. Much of the support for TRI goes to purchasing and maintaining

equipment that can be shared among the company tenants with an in-kind contribution of at-cost facility space.

The TRI space, located in the Medical Laboratories building, can house up to four early-stage research-based biomedical or life science companies focused on commercializing technology developed at the University of Iowa. The space is ideal for small start-ups that need to conduct early-stage proof-of-concept experiments, often with SBIR/STTR funding, to attract the investment needed to expand operations at the UI Research Park and other locations. The TRI has proven successful in helping companies secure over \$12M in both federal (SBIR/STTR) and private grants. These companies have gone on to raise over \$57M in equity funding.

MADE

Iowa MADE (<https://iowamade.org/>) is a first of its kind program, in the nation, whose mission is to encourage and facilitate the UI community to bring innovative, need-based products to market with the goal of enhancing economic development at the university as an extension of research and scholarship.

MADE is a manufacturing and e-commerce initiative launched in FY18 with 3 objectives: 1) bring simple, low volume technology to market utilizing local Iowa manufacturing whenever possible; 2) contribute to a cultural transformation around innovation on campus; and 3) provide students with an opportunity to learn first-hand the tools necessary to bring a product to market. The program crosses several departments with products from Ophthalmology, Anesthesiology, Dentistry, Cardiothoracic Surgery, and General Surgery. Products are available for sale through the iowamade.org website and revenue is used to reimburse development costs to encourage continued support of innovation and development. All technologies remain available for licensing to an external company through UIRF.

An undergraduate student operations team maintains the FDA compliant quality system, manufacturing, product management, marketing, and sales. These students have the unique opportunity to gain in depth real-world experience and leadership skills on campus to complement their classroom education.

IOWA

John Pappajohn Entrepreneurial Center

The John Pappajohn Entrepreneurial Center (Iowa JPEC) (<https://www.iowajpec.org/>) offers nationally recognized comprehensive entrepreneurial education and training programs that are available to all Iowans. At the undergraduate level, Iowa JPEC and the Department of Management and Entrepreneurship offer a BBA in Management with an Entrepreneurial Management Track to Tippie College of Business students. Iowa JPEC and the College of Liberal Arts and Sciences offer a BA in Enterprise Leadership (on-campus and online). In addition, Iowa JPEC offers the Technological Entrepreneurship Certificate for engineering students and the Certificate in Entrepreneurial Management for all undergraduate students. The Tippie College of Business offers a Graduate Innovation Certificate. Advanced entrepreneurship courses are also offered to MBA students.

Iowa JPEC and its university partners also play an important role in the development of Iowa-based technology and high-growth start-up companies. On-campus programs include business incubation programs for undergraduate students, business incubation and acceleration programs for faculty, staff, and graduate students, and the NSF I-Corps Training program as an affiliate of the Great Lakes I-Corps Hub. Statewide entrepreneurial support programs include Venture School entrepreneurial training program, MIT-based Venture Mentoring Service for entrepreneurs, Business Consulting, and Enterprise Internships.

IOWA

Center for Advancement

The University of Iowa Center for Advancement's (UICA) (<https://www.foriowa.org/>) Corporate and Foundation Relations group promotes economic development through connecting corporate partners with the UI's strengths. In addition to connecting established companies with the university, the Center for Advancement is a key player in tapping UI's extensive alumni base to support entrepreneurship and technology commercialization through monetary resources and, equally important, advice and expertise.

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UI Pharmaceuticals

UI Pharmaceuticals (<https://uip.pharmacy.uiowa.edu/>) is a fee for service entity on the University of Iowa Campus that provides contract drug manufacturing (CDMO) services to academic, biotech, and pharmaceuticals clients. These services range from early-stage formulation development, analytical method support, clinical trial material manufacturing, to commercial product manufacture and support. It is organizationally structured as a division of the UI College of Pharmacy and employs approximately 95 pharmaceutical professionals. UI Pharmaceuticals has been operating for over 45 years and supports the manufacturing and testing of both clinical and commercial products. The seven departments that comprise the program are as follows:

- Sterile Manufacturing
- Non-Sterile Manufacturing
- Quality Assurance
- Analytical Services
- Preformulation and Formulation Development
- Business Development
- Engineering and Facilities

IOWA

Center for Biocatalysis and Bioprocessing

The Center for Biocatalysis and Bioprocessing (CBB) (<https://cbb.research.uiowa.edu/>) is an academic center at the UI focused on advancing biotechnology through the creation and dissemination of discoveries in the biocatalytic sciences.

As an internationally recognized contract development and manufacturing operation (CDMO), the CBB facility specialized in the optimization and scale-up of complex bioprocesses to produce pilot-scale, high valued bio-based chemicals. Most notably, the CBB's facility fills a worldwide niche to produce recombinant proteins of commercial and research value.

A fraction of these proteins is produced under strict standards defined by the FDA, referred to as *current good manufacturing practices* (cGMP). The CBB's cGMP suite operates under the 2008 FDA guidance for Phase I clinical studies, which means the products produced under this standard can be used to determine the safety and efficacy of putative therapeutics. The CBB's cGMP operation is ideally suited for startup companies with limited budgets who need

information for the Chemistry, Manufacturing, and Control (CMC) section of their Investigative New Drug (IND) applications required by the FDA before Phase I clinical trial testing can begin. The CBB operates the only facility in the State of Iowa that manufactures vaccines and therapeutic proteins for Phase I clinical trials in people.

Clients range from international corporations to virtual startups. In addition, the facility's professional staff supports clients who are preparing SBIR/STTR grant applications and staff consults for companies preparing IND applications for the FDA.

The CBB bioprocessing facility is initiating a new effort designed to accelerate the translational path required to realize commercially viable products from laboratory discoveries. In the biotechnology sector, failure to demonstrate manufacturability is a major barrier to commercialization. The CBB's expertise in both the development and scale-up of robust biomanufacturing processes is ideally suited to help startup companies to bridge this gap. Successful demonstration of manufacturability greatly reduces the risk of the technology and increases its commercial value, thereby enhancing investment opportunities.

III. University of Iowa's Economic Development Activities in FY23

- **UI Research Park**
 - The UI Research Park is home to 31 companies, employing over 3,600 total employees, 1,022 of those located on the park. Total payroll associated with Park companies is more than \$3 million.
 - Companies residing on the Research Park, and in particular those residing in the BioVentures Center, have access to a variety of services, including: Shared laboratory equipment room; Executive board room and conference rooms; Multi-purpose room seating 70; Breakroom/vending area, atrium and lounge areas; Shipping/receiving area; High-speed wired & wireless internet; Emergency backup generator; Shared equipment room that includes: Autoclave, Laboratory glassware washer/dryer, RO/DI water system, Ice machine, -80° freezer; and the vast resources at the UI's CCOM via their core facilities.
- **UI Ventures**
 - UI Ventures currently supports 31 companies including 4 that formed in FY23.
 - Faculty and staff founded companies raised over \$33 million in equity funding in FY23.
 - In FY23, four UI faculty/staff companies were awarded \$2.7 million in SBIR/STTR grants.
 - In FY23, 9 Innovation Fund awards were made across 5 colleges for a total of \$315,000 granted to faculty to aid the translation of their research towards commercial potential.
 - Launched the Nurse Innovators program, reaching >300 nurses with 20 projects in development
 - Supported the inaugural Innovation Leadership Fellows cohort comprised of graduate and postgraduate students, medical students, and dentists
 - Expanded the Entrepreneur in Residence program to include a Venture Capitalist in Residence
 - UI Ventures continues to build a stronger economic development pipeline through programs that support business executive interactions, coaching and connections with investors, business strategy support, and other startup resources.
- **Iowa MADE**
 - MADE had 4 products on the market in FY23 and students continued to develop an additional 4 products originating from the Colleges of Medicine and Dentistry, and the UIHC Dept of Nursing.
 - MADE alumni continue to receive competitive job offers directly related to their work at MADE and are 100% employed upon graduation.
 - MADE utilizes suppliers in Iowa to support the state economy and presently 100% of part suppliers are Iowa companies
- **Protostudios**

- Protostudios worked with 36 clients across 46 unique design and production projects in FY23.
- Employed 6 UI students providing them with hands-on experience in client interaction, project management, design, and a variety of technical skills.
- **Iowa JPEC**
 - Key metrics

○ Start-up Companies Served (New Business Starts)	531
○ Program, Seminar & Workshop Participants	5,730
○ Estimated Job Creation	274
○ Hours dedicated to Clients	11,538
○ Total Clients (Individuals receiving assistance)	772
○ Total Youth Impacted (K-12)	21,355
○ Seed Money Awarded	\$408,350
○ Total Participants Across All Programs	11,059

(Including Academic, Outreach, and Youth)
 - Academic Program – Iowa JPEC delivers campus-wide and online undergraduate education and technology innovation coursework in the MBA and other graduate management programs. Majors (BA and BBA) and Certificate programs exist for all undergraduate students at UI including specialized programs for students in engineering. During FY23, 4,405 students enrolled in 137 classes, 351 students received a degree and 87 students earned an entrepreneurship certificate.
 - Bedell Lab Student Incubator – The student Startup Incubator housed at the 10,000 sq. ft. Bedell Entrepreneurship Learning Laboratory has 17 private offices for the most advanced start-ups, numerous co-working spaces for the others, and several conference rooms. This campus-wide program is open to students from every college and major. The students receive intense mentoring and support as they launch or expand their businesses. The program, one of the first of its kind in the nation, has impacted 1,594 students since opening in 2004. During FY23, the Startup Incubator supported 36 student start-ups made up of 49 students.
 - Startup Incubator Summer Track – Throughout the twelve-week program, accelerator teams made up of undergraduate and students meet daily to launch their start-up by using Lean LaunchPad methodologies. Through brunch-and-learns, work sessions with experienced mentors, weekly pitches, and lectures, the program aims to drive the start-up process for students, while increasing their start-ups’ chance for success. In FY23, 24 teams and 34 students participated.
 - Business plan and pitch competitions – Iowa JPEC hosts and sponsors a variety of ideation, elevator pitch, business model, and business plan competitions for UI students, faculty, and staff. During FY23, a total of \$408,350 was awarded to start-ups.

- Jacobson Institute for Youth Entrepreneurship – The Jacobson Institute is a comprehensive program that enriches K-12 students’ lives through classroom and practical educational experiences. Programming and impact include:
 - BizInnovator Program – Curriculum and teacher training focused on entrepreneurship and business. In FY23, 269 teachers from 234 schools in 42 states used the curriculum nationwide and impacted 11,804 students.
- Alumni-Student Mentoring Program – This program was established to connect entrepreneurship students with esteemed alumni to enhance students’ professional and personal development for future success. In FY23, 114 students were paired alumni mentors.
- Okoboji Entrepreneurial Institute – Iowa JPEC established the annual, week-long Okoboji Entrepreneurial Institute (OEI) in a partnership among state of Iowa universities and colleges, as well as Iowa Lakes Corridor Development in 2006. To date, this summer program continues to provide students with an immersion into entrepreneurship and business strategy and develop an outstanding network of peers and business professionals. In FY23, 7 students participated for a total of 199 since inception.
- Student Organizations – Several campus-wide clubs and organizations focused on entrepreneurship are sponsored by Iowa JPEC.
- Venture School Entrepreneurial Training Program – Iowa JPEC offers an immersive “Lean LaunchPad”, business model canvas, seven-week boot camp training program named Venture School to accelerate start-ups. Venture School is offered in multiple locations across Iowa. The program emphasizes real-world entrepreneurship through experiential learning, a flipped classroom, and immediate feedback. During FY23, workshops were offered in Coralville/Kirkwood CC, Davenport/EICC, Des Moines/DMACC, Sioux City/Iowa’s West Coast Initiative, Dubuque/Innovation Lab, Mason City/NIACC, and virtually. There were 83 startups made up of 92 entrepreneurs.
- UI Small Business Development Center – The UI hosts an SBDC that serves a five-county area (Cedar, Johnson, Iowa, Poweshiek, and Washington counties). During FY23, the UI SBDC served 327 start-ups and small businesses. This contributed to the creation of 109 jobs and \$7,191,848 in equity being raised.
- Institute for International Business (IIB) – The IIB is dedicated to advancing knowledge and international skills in business and educational communities through research, education, and consulting. During FY23, 4 International consulting projects were completed by University of Iowa students and faculty.
- Business Consulting Program – Iowa JPEC offers business consulting services to entrepreneurial and start-up companies around the state. During FY23, 71 projects were completed for 44 clients in 14 counties: Adair, Allamakee,

Blackhawk, Dubuque, Hennepin, Johnson, Linn, Louisa, Mitchell, Polk, Poweshiek, Scott, Washington, Woodbury.

- Iowa Enterprise Interns Program – Iowa JPEC provides funding support enabling Iowa start-ups to hire UI student interns as they work to grow their businesses. In FY23, 12 students were placed in 18 start-ups in these Iowa counties: Dallas, Dubuque, Johnson, Linn, and Plymouth.
- Pappajohn Entrepreneurial Ventures Competition – In partnership with the Pappajohn entrepreneurship centers at ISU, UNI, Drake, and NIACC as well as the Iowa Economic Development Authority, Iowa JPEC sponsors this annual competition to support start-ups around the state. Each year, over \$100,000 in seed funding is awarded in total to three companies.
- NSF I-Corps Training Program – The University of Iowa was awarded a multi-year National Science Foundation (NSF) I-Corps Site grant in FY15 to support UI faculty, staff, and student entrepreneurs. This program is a joint effort between the Office of the Vice President for Research and Economic Development, the UI Office of Innovation, UI Ventures, and Iowa JPEC. The goal of this program is to accelerate 90 faculty and staff start-ups. During FY23, 26 start-ups made up of 28 faculty and staff participated.
- Regional Partnerships / Eco-system Development – Iowa JPEC partners and engages with numerous local, regional, and statewide organizations to support entrepreneurs and contribute to the vital entrepreneurial ecosystem. These organizations include chambers of commerce, economic development organizations, business accelerators (Global Insurance Accelerator, Goldman Sachs 10,000 Small Businesses, Iowa Startup Accelerator, and TechStars, state agencies, other universities (Drake, ISU, and UNI), and community colleges (DMACC, EICC, Kirkwood, NIACC, WIT).
- National Engagement – Iowa JPEC engages with several national and international organizations focused on small business, entrepreneurship, economic development and technology commercialization. This includes not only membership but also committee participation and invitations to present best practices.
- **UI Center for Advancement**
 - Assists with aligning recruiting efforts and providing access to UI faculty and staff. It promotes corporate partner and foundation student scholarship and programming opportunities. UICA facilitates UI's partnership with ICR Iowa to promote "Boomerangs" to return to the state to fill job openings.
- **UI Pharmaceuticals**
 - In FY23 UI Pharmaceuticals worked with ~100 different clients to manufacture and testing ~90 individual lots of material, resulting in ~\$17 million in total revenues UI Pharmaceuticals currently supports client programs across the United States as well as in Europe, Asia, Africa, and South America.

- UI Pharmaceuticals made significant progress in bringing its state of the art sterile manufacturing facility online, targeting revenue generating batches in the first quarter of 2024.
- **Center for Biocatalysis and Bioprocessing**
 - The Center generated \$3.2 million in annual revenue working with biopharma, commodity proteins and food products projects.
- **UI Research Foundation**

	FY17	FY18	FY19	FY20	FY21	FY22	FY23
Disclosures	93	143	83	95	101	103	72
Licenses + options	58	51	48	37	47	48	47
Patent applications	148	153	160	146	95	188	174
Issued patents	42	74	54	72	86	80	58

Regents Innovation Funds Spent to Promote Economic Development in Iowa

- Protostudios: \$225,897 for personnel and general expenses
- UI Research Park: \$79,835 for BioVentures Center personnel, operating/general expenses
- UI Ventures and MADE: \$713,352 for personnel, consultants, student interns, award and general expenses

The University of Iowa recognizes the important role it has to play in the state’s economic development ecosystem. The university is committed to improving the quality of life in Iowa through a sustainable cycle of research and creative activity leading to job and wealth creation in the State. Realization of these goals make Iowa a healthier, more prosperous, and attractive place to live. The university will continue to ensure that Federal, State and philanthropic monies invested in research is leveraged to develop new economic opportunities for Iowans.